



**UNITED STATES DEPARTMENT OF COMMERCE**  
**Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
|-----------------|-------------|----------------------|---------------------|
| 09/288,877      | 04/09/99    | MCSHANE              | C 08215/301001      |

JOHN A BURTIS  
FISH & RICHARDSON  
60 SOUTH SIXTH STREET  
SUITE 3300  
MINNEAPOLIS MN 55402

IM62/0725

EXAMINER

OGDEN JR, N

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1751

DATE MAILED:

07/25/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

|                              |                                      |                                       |  |
|------------------------------|--------------------------------------|---------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>09/288,877 | <b>Applicant(s)</b><br>MCSHANE ET AL. |  |
|                              | <b>Examiner</b><br>Necholus Ogden    | <b>Art Unit</b><br>1751               |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

**Status**

1) ☒ Responsive to communication(s) filed on 08 May 2000.

2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) 15-34 and 38-41 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.

6) ☒ Claim(s) 15-34 and 38-41 is/are rejected.

7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.

8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All   b) ☐ Some \* c) ☐ None of the CERTIFIED copies of the priority documents have been:

1. ☐ received.

2. ☐ received in Application No. (Series Code / Serial Number) \_\_\_\_\_.

3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

**Attachment(s)**

15) ☐ Notice of References Cited (PTO-892)

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.

18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.

19) ☐ Notice of Informal Patent Application (PTO-152)

20) ☐ Other: \_\_\_\_\_.

Art Unit: 1751

## DETAILED ACTION

### *Election/Restriction*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-14 and 35-37, drawn to a dielectric fluid, classified in class 252, subclass 570.
  - II. Claims 15-34 and 38, drawn to a method of using an electrical device, and a device for generating or distributing electrical energy, classified in class 174, subclass 17LF.
2. The inventions are distinct, each from the other because of the following reasons: Inventions of Group I and Group II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the product as claimed can be used in a materially different process, such as a lubricating process.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Art Unit: 1751

4. During a telephone conversation with John Hayden on November 2, 1999 a provisional election was made with traverse to prosecute the invention of Group II, claims 15-34 and 38. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-14 and 35-37 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).

***Oath/Declaration***

6. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

It was not executed in accordance with either 37 CFR 1.66 or 1.68.

The examiner notes that the declaration submitted April 9, 1999 is unexecuted.

Art Unit: 1751

***Information Disclosure Statement***

7. Several references listed on the Information Disclosure Statement have not been considered because the examiner was unable to locate copies of these references. In particular note Foreign Patent Document DQ and "Other Documents" DR and DS. Furthermore, no publication data has been listed for document DS.

***Claim Rejections - 35 USC § 112***

8. Claims 16, 33 and 34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "alkyl or alkenyl group that may be straight-chained or branched, may be saturated or unsaturated" in claim 16 is confusing because alkyl groups are inherently saturated and alkenyl groups are inherently unsaturated; accordingly, the phrase "may be saturated or unsaturated" in claim 16 does not appear to be necessary. Furthermore, the phrase "substituted with one or more functional or non-functional moieties" in claim 16 is vague and indefinite because one of ordinary skill in the art would not be able to determine the identity of "functional or non-functional moieties".

Claim 33 recites the limitation of "[t]he device of claim 32 wherein said oxidation reducing compound", however claims 32 does not provide antecedent basis for the phrase "oxidation reducing compound". Specifically, claim 33 refers to said "oxidation

Art Unit: 1751

reducing compound", whereas claim 32 (upon which claim 33 depends) refers to an "oxidation reducing composition. Similarly, note claim 34.

The term "alkali compounds" in claim 33 is vague and indefinite because one of ordinary skill in the art would be unable to determine the identity of those "alkali compounds" which would act as an oxidation reducing compound.

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 15-23, 26, 28, 29, 31 and 38 rejected under 35 U.S.C. 102(b) as being anticipated by Japanese patent 61-260,503 (JP '503).

JP '503 discloses a transformer which employs vegetable oils with 0.01-5 weight percent of alkylmethacrylate polymers (Abstract).

11. Claims 15-23, 28-31 and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. patent 4,806,276 to Maier and U.S. patent 3,702,895 to deSlo.

Art Unit: 1751

Maier teaches that it is well known to employ vegetable oils in transformers (col. 6, lines 56-59). DeSlo teaches that it is well known to employ vegetable oils in an electrical cable (Abstract and col. 6, lines 3-12).

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 15-31 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 4,734,824 to Sato et al.

Sato et al disclose an electrical insulating oil which is suitable for use in impregnating electrical appliances such as capacitors, cables and transformers comprising at least one mono-olefin and/or diolefin having three condensed or non-condensed aromatic rings (Abstract). Sato et al further teach that the aromatic olefins can be mixed with other known electrical insulating oils such as vegetable oils of triglycerides such as castor oil and cotton seed oil (col. 6, lines 18-36), and furthermore that known antioxidants may be added to the electrical insulating oil (col. 7, lines 7-33). Sato et al, however, do not exemplify an electrical cable or a transformer containing a vegetable oil.

Art Unit: 1751

It would have been obvious to one of ordinary skill in the art to employ a vegetable oil as the electrical insulating oil in either an electrical cable or a transformer because Sato et al teach that it is well known to employ vegetable oils as an electrical insulating oil, and furthermore, that electrical insulating oils are known to be employed in capacitors, cables and transformers.

14. Claims 15-34 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 4,734,824 to Sato et al, in view of U.S. patent 4,702,966 to Farrell et al.

Sato et al is relied upon as set forth above. Sato et al, however, do not disclose the inclusion of an oxidation reducing composition which is enclosed in a polymeric housing material within the device.

Farrell et al disclose an article comprised of a polymeric protective material having incorporated therein a dry oxygen scavenger material (col. 9, lines 44-47), wherein this article is employed in a container which houses contents which are susceptible to oxidation (col. 3, lines 14-26). Farrell et al further teach that in the past antioxidants were added to the materials housed within the container to prevent oxidation (col. 4, lines 13-37), however the use of the article discussed above may replace the inclusion of antioxidants in the composition which is susceptible to oxidation.



Art Unit: 1751

It would have been obvious to one of ordinary skill in the art to employ the article of Farrell et al in the electrical appliance of Sato et al because the composition contained within the electrical appliance of Sato et al may employ an antioxidant, and Farrell et al teach that an article comprised of a polymeric protective material having incorporated therein a dry oxygen scavenger material may be used to replace an antioxidant contained within the composition which is susceptible to oxidation.

### ***Conclusion***

15. The following references are cited to teach the state of the art.

U.S. patent 5,736,915 to Goedde et al discloses an electrical apparatus, such as a transformer, that is completely filled with a dielectric fluid (Abstract), wherein the dielectric fluid may include vegetable oils (col. 21, lines 40 - col. 22, line 35). Note, however, that Goedde et al is not available as prior art as Goedde et al was filed on December 21, 1995, and applicant has claimed priority going back to December 21, 1995. Similarly, note U.S. patent 5,766,517 to Goedde et al (col. 21, line 40 - col. 22, line 35).

U.S. patent 5,949,017 to Oommen et al discloses an electrical transformer containing a high oleic acid triglyceride composition (col. 11, lines 41-60).

Art Unit: 1751

U.S. patent 5,958,851 to Cannon et al discloses a biodegradable electrically insulating soybean oil (Abstract) which may be employed in an electrical transformer or an electrical transmission cable (col. 11, line 66 - col. 12, line 11).

Canadian patent 2,204,273 to Sundin teaches that vegetable oils may be employing in transformers, switches and fuses (Abstract). Note, however, that Sundin is not available as prior art.


WO 94/14731 to Fookes discloses a process for the simultaneous removal of a halide from a halide containing organic compound and the reduction of an oxygen containing organic compound in a solvent (Abstract). Note that Fookes teach that the organic compound is preferably a transformer oil (page 65, Example 4).

Art Unit: 1751

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Skane whose telephone number is (703) 308-2526.

The examiner can normally be reached between about 8:00 AM and about 6:00 PM, E.S.T., Monday through Thursday, as well as alternate Fridays. The fax numbers for this Technology Center are:

- a. **(703)305-3599 -- FOR AFTER-FINAL FAXES ONLY**, and
- b. **(703)305-7718 -- FOR ALL OTHER OFFICIAL FAXES**. Any inquiry of a general nature or relating to the status of the application should be directed to the Tech. Center receptionist at (703)308-0661.



Christine Skane  
Primary Examiner  
Art Unit 1751

CS  
December 20, 1999